

Daughters and Sons to Work Day 2002



Ninth Edition

Registration Information Packet

April 2002

"It's YOUR Universe" is the theme for *Take Our Daughters and Sons to Work Day* (DSTW) Thursday, April 25, 2002. For the ninth consecutive year Berkeley Lab, will host guests of employees, both girls and boys ages **9 to 15** to a day of science filled with fun. DSTW generates a lot of enthusiasm among employees each year. As **space is limited to 240 children** we advise early registration.

The Schedule for Daughters and Sons to Work Day 2002 is:

9:00 – 9:30	Registration	Cafeteria Bldg. 54
9:30 – 10:30	Opening Assembly	Building 50 Auditorium
11:00 – 12:00	Morning Workshops	Assigned Locations
12:00 – 12:45	Lunch	Parking Lot Z
1:00 – 2:00	Afternoon Workshops	Assigned Locations
2:15 – 3:00	Ice Cream Social & Sign Out	Cafeteria Bldg. 54

Note: Workshops are offered in packages. Please have your guest refer to the workshop schedule and descriptions inside this brochure and select the 1st, 2nd, and 3rd choices for workshop packages she or he would like to attend. Indicate selections on registration form.

A fee of \$10 per child is being charged to cover expenses for this event.

How to Register

Enclosed is the DSTW registration information for you to review with your guest. **Please fill out the registration form for 1 to 3 children. Send in the Registration Form with a check of \$10 per child, (+\$2.50 if you plan on joining your guest(s) for lunch), payable to UC Regents (address follows).** Keep the remaining information for your reference. Your workshop assignment will be sent to you by April 16. Assignments will be made on a **first-come, first-served basis**. If your first choice is not available you will be placed in your 2nd or 3rd choice workshop.

❖ **Registration forms are due April 11** ❖

Please mail Registration Form and a check payable to U.C. Regents and send to:

**DSTW
CSEE
MS 7-222**

❖ **No registration forms will be accepted after April 11** ❖



Opening Assembly

9:30 - 10:30

Building 50 Auditorium



Workshop Packages and Descriptions

Listed below are the Workshop Packages for Daughters and Sons to Work Day. Each package includes two workshops. Descriptions of the workshops are listed below. Please select one (1) package and write the package number on the registration form in the space provided. Since workshops will be filled on a first-come first-served basis, please include a second and third choice in case your first choice is not available. Note that some of the workshops are the same, only the times are reversed.

Workshop Package	11:00 - 12:00	1:00 - 2:00	Recommended Age
1	Firehouse	Antarctica	All
2	ALS	Medical Imaging	All
3	Liquid Nitrogen	ALS	All
4	Glassblowing	Liquid Nitrogen	All
5	Medical Imaging	Fire House	All
6	Antarctica	Glassblowing	All
7	Ergonomics	NCEM	11-15
8	Seeing The Light	Oceans & Climate	11-15
9	Computing & Networking	Ergonomics	14-15
10	Nuclear Science	Seeing the Light	14-15
11	Oceans & Climate	Nuclear Science	11-15
12	NCEM	Computing & Networking	11-15



Ice Cream Social

2:15- 3:00

Bldg. 54 Cafeteria

Daughters and Sons to Work Day 2002

April 25, 2002



Workshop Descriptions All Ages

FIREHOUSE:

"Calling 7-911... This is an Emergency..."

When sirens blare, what really goes on behind the red brick walls of a fire station? After viewing a fire safety film, guests will be introduced to the basics of fire fighting at the Berkeley Lab with a demonstration of the equipment and safety clothing used.

ALS (ADVANCED LIGHT SOURCE):

"See a 'Light Show' at the ALS!"

Come and discover how and why electrons are accelerated to almost the speed of light; how magnets are used to direct and control a hair-thin beam of electrons; how x-rays are produced by speeding electrons, and how x-rays are used for scientific research. During your visit to the ALS you will also build your own electromagnet and explore the polarizing properties of light.

LIQUID NITROGEN:

"Air so cold that it turns to a liquid!"

Have you ever deflated a balloon without letting the air out? Have you ever made ice cream using liquid air? Have you ever frozen a rubber band so that it shatters when you drop it? Have you ever made a cloud? You will do all of this when you experience the properties of Liquid Nitrogen (LN). Learn about Liquid Nitrogen, its properties, and what it means to be -1095.8 C below zero!

GLASSBLOWING:

"The Art of Making Glass"

Glass has been used by man from the earliest recorded times. Scientific glassblowing is simply the fabrication of glass for an experimental purpose. Learn a little about what glass is, how it is made, and its history. Glassblowing will be demonstrated and you will blow your own round bottom flask, bottle or a holiday ornament.

MEDICAL IMAGING:

"Imaging the Body with Lasers and Ultrasound"

Find out how we can image inside the body using laser light and ultrasound. We will see how heat and cold affect blood flow to the skin by making maps of the flow using a laser. We will look at and listen to the blood flow in large blood vessels using an ultrasonic imager. We might even catch a glimpse of the valves of the heart in action.

ANARCTICA:

"Doing Science in Antarctica"

Learn what it's like to travel to Antarctica and do scientific research there. Try on some of the "Extreme Cold Weather" clothing and imagine working outdoors at 50 degrees below zero when the sun never sets. Find out about a cold desert where nothing has moved for two million years, and why this may reveal clues about life on Mars.

Daughters and Sons to Work Day 2002

April 25, 2002



Workshop Descriptions Ages 11-15

ERGONOMICS:

"Ergo is the Way To Go!"

More and more these days we see schools, businesses and households around the country promoting, instructing, advertising, and encouraging children to use computers for education, research, and entertainment.. Kids are thrust into using this technology early in life and within a setting designed for adults. To succeed, they must force-fit their smaller bodies and biomechanical movements in this physical environment. Kids need to be concurrently taught sound ergonomic principles/practices along with basic computer skills. If not, the risk of cumulative trauma, musculoskeletal injury, or reinforcing at-risk behaviors ever increases. Come have your daughters and sons learn about the ergonomics basics and that "Ergo is the way to go!"

SEEING THE LIGHT:

"Windows that save Energy!"

Did you know that you are a "light" source? Come see what you look like using an infrared camera that is "on your wavelength." Infrared light (such as you are emitting all the time) tells exactly the temperature of the surface that generates it. Scientists in the Windows Lab use this temperature seeing tool to test experimental windows designed to save energy. At the Windows Lab you will discover how to make windows more energy efficient and keep your home heating and cooling efforts from going "out the window."

COMPUTING & NETWORKING:

"The Future for Communication and Collaboration"

In this session you will be introduced to the wonders of group-to-group collaboration. You will interact with other groups of kids at other Department of Energy and university sites in Montana, New Mexico, Illinois, Washington, California, Tennessee and New York over the access grid. The feeling is more than a phone call with pictures on a screen: it is like being there. Find out how the system lets you work on projects with friends across the country just as though they were sitting with you.

NUCLEAR SCIENCE:

"Radiation and Life"

We are constantly being bombarded by radioactive particles: from space, from the soil around us, and from the food we eat. In this workshop we will learn about radiation and radioactive particles, and how to detect them. We will measure the radioactivity in common household products and from space and we will talk about radiation and it's place in the environment.

OCEANS & CLIMATE:

"Oceanographers in Action"

The interaction between the world's oceans and the earth's climate is a primary focus of oceanographers at Berkeley Lab. We've been from the Arctic to the Antarctic, with pictures and videos of lots of stops in between, just to study the extent to which the oceans absorb carbon dioxide released into the atmosphere from fossil fuel burning and other human activities. There will be a hands-on display of the optical oceanographic sensors that we're developing at LBNL and the next-generation, unmanned vehicles on which they are deployed. Witness an interactive demonstration on our powerful instrument that we use to measure and trace amounts of elements in sea water.

NCEM (National Center for Electron Microscopy):

"Working With Micro Machines"

The advances in the computer industry have provided us with the great opportunity to build machines that allow us to create complete mechanical assemblies using the same methods that have allowed the rapid advancement in modern electronics. Some that are used today include the life-saving trigger for auto air bags, optical switches that route the Internet and exciting biomedical applications in development. You will be able to view, discuss and in some cases actually work with the equipment key to this developing technology. Please plan on visiting us and experiencing first hand this exciting advancement; what would have seemed impossible Science Fiction Fantasy only a few years ago is at LBL today.

Daughters and Sons to Work Day 2002

April 25, 2002



Guest Registration Form

Please Print Legibly

Name of Guest (1): _____

Age: _____ Grade: _____ Daughter: _____ Relative: _____ (What relation?: _____)
Son: _____ Friend: _____

Guest School: _____ School Address: _____

My guest is attending for: _____ (first year) _____ (second year) _____ (third year) _____ (fourth year) _____ (fifth year)

Workshop Choice:

My guest would like to attend package number:
(1st choice) _____ (2nd choice) _____ (3rd choice) _____
(See brochure)

T-Shirt size:(adult sizes)

_____XL _____Large
_____Medium _____Small

Lunch Choice Of:

BBQ Hot Dog #____ or
Veggie Dog #____ w/ Chips,
Soda, Water and Cookies.



Registration Fee for 1 Guest Total: \$10.00

Name of Guest (2): _____

Age: _____ Grade: _____ Daughter: _____ Relative: _____ (What relation?: _____)
Son: _____ Friend: _____

Guest School: _____ School Address: _____

My guest is attending for: _____ (first year) _____ (second year) _____ (third year) _____ (fourth year) _____ (fifth year)

Workshop Choice:

My guest would like to attend package number:
(1st choice) _____ (2nd choice) _____ (3rd choice) _____
(See brochure)

T-Shirt size:(adult sizes)

_____XL _____Large
_____Medium _____Small

Lunch Choice Of:

BBQ Hot Dog #____ or
Veggie Dog #____ w/ Chips,
Soda, Water and Cookies.



Registration Fee for 2 Guests Total: \$20.00

Name of Guest (3): _____

Age: _____ Grade: _____ Daughter: _____ Relative: _____ (What relation?: _____)
Son: _____ Friend: _____

Guest School: _____ School Address: _____

My guest is attending for: _____ (first year) _____ (second year) _____ (third year) _____ (fourth year) _____ (fifth year)

Workshop Choice:

My guest would like to attend package number:
(1st choice) _____ (2nd choice) _____ (3rd choice) _____
(See brochure)

T-Shirt size:(adult sizes)

_____XL _____Large
_____Medium _____Small

Lunch Choice Of:

BBQ Hot Dog #____ or
Veggie Dog #____ w/ Chips,
Soda, Water and Cookies.



Registration Fee for 3 Guests Total: \$30.00

Will you be attending the
Hot Dog Lunch with your
guest(s)? YES NO

Lunch Choice Of:

BBQ Hot Dog #____ or
Veggie Dog #____ w/ Chips,
Soda, Water and Cookies.

Add: \$2.50

Total: \$.

Daughters and Sons to Work Day 2002

April 25, 2002



LBNL Employee/Parent Consent Form

Please Print Legibly

Name: _____

Department: _____ Division: _____

Extension: _____ Cell Phone/Pager: _____ Mailstop: _____

- Please do not take your child off site for lunch or out of workshops without making future arrangements with CSEE staff before April 24, 2002.
- You must forward your phones to a person who knows where you will be at all times or have your cell phone listed and on.
- **Parents must attend Ice Cream Social beginning at 2:15 p.m. in the Cafeteria so they may sign their guest(s) out.**

Children are required to attend the entire day's event

Opening Assembly	9:30 – 10:30	Bldg. 50 Auditorium
Morning Workshops	11:00 – 12:00	Assigned Locations
Lunch	12:00 – 12:45	Parking Lot Z
Afternoon Workshops	1:00 – 2:00	Assigned Locations
Closing Assembly	2:15 – 3:00	Parking Lot Z
Pick-up	3:00	Parking Lot Z

I agree to allow my child _____ (Guest 1), to participate in "Take Our Daughters and Sons to Work Day" at LBNL. This agreement authorizes the laboratory to administer medical treatment to my child in an emergency. Further, I waive all responsibility of the laboratory in the case of an accident.

Parent/Guardian _____ Phone _____

I agree to allow my child _____ (Guest 2), to participate in "Take Our Daughters and Sons to Work Day" at LBNL. This agreement authorizes the laboratory to administer medical treatment to my child in an emergency. Further, I waive all responsibility of the laboratory in the case of an accident.

Parent/Guardian _____ Phone _____

I agree to allow my child _____ (Guest 3), to participate in "Take Our Daughters and Sons to Work Day" at LBNL. This agreement authorizes the laboratory to administer medical treatment to my child in an emergency. Further, I waive all responsibility of the laboratory in the case of an accident.

Parent/Guardian _____ Phone _____

**Registration deadline is April 11th ❖ Enrollment is limited to 240 children
❖ Send to: DSTW, CSEE, MS 7-222❖**

Daughters and Sons to Work Day 2002

April 25, 2002



Chaperone Registration Form

Please Print Legibly

Name: _____

Department: _____ Division: _____

Extension: _____ Cell Phone/Pager: _____ Mailstop: _____

T-Shirt size: (adult sizes) ____XL ____Large ____Medium ____Small	Lunch Choice Of: BBQ Hot Dog #____ or Veggie Dog #____ w/ Chips, Soda, Water and Cookies.
--	---

PLEASE Check all that you may be able to help with and mail to:
DSTW, CSEE MS 7-222

☐

All Day, All Events

From 8:45 till 3:00

☐

Help With Registration

From 8:45 till 9:30

☐

Morning Workshop

From 9:30 till 12:00

☐

Help With Lunch

From 11:00 till 1:30

☐

Afternoon Workshop

From 12:45 till 2:15

☐

Help With Ice Cream Social

From 1:30 till 3:00